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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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PADGETT, MARIANNE L

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DIRK HEINRICH  
and HEINZ SCHOLTEN

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Appeal 2009-011072  
Application 10/624,590  
Technology Center 1700

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Decided: February 16, 2010

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Before ADRIENE LEPIANE HANLON, CHUNG K. PAK, and  
PETER F. KRATZ, *Administrative Patent Judges*.

HANLON, *Administrative Patent Judge*.

DECISION ON APPEAL

A. STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134 from an Examiner's decision rejecting claims 1-7, 10, 11, 15-17, 19, and 22.<sup>1</sup> We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

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<sup>1</sup> Claim 21 is also pending but has been withdrawn from consideration.

Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A process for chromate-free outer coating of a pipe with a fluidized bed and a pulverulent fusible polymer as a coating material, the process[ ]comprising

cleaning the pipe with a pretreatment system,

applying a primer to the pipe,

baking the primer with an induction coil at a frequency of from 2,000 to 10,000 Hz,

coating the pipe with a coating material in a fluidized-bed coating basin comprising an induction coil incorporated in said fluidized-bed coating basin, an air flush system positioned above the pipe to eliminate powder accumulation and one or more metal flow-guide panels positioned below the pipe to eliminate powder deficit and resultant pores on the underside of the pipe,

wherein the coating material comprising one or more pulverulent fusible polymers to form a coated pipe having a polymer coating,

melting the polymer coating by heating with an induction coil at a frequency of from 2,000 to 10,000 Hz to form a pipe having a melt coating, and cooling to form a pipe having a hardened coating, and

wherein the pipe is not treated with chromate.

App. Br., Claims Appendix.

The only Examiner's rejection before us on appeal is the rejection of claims 1-7, 10, 11, 15-17, 19, and 22 under 35 U.S.C. § 103(a) as

unpatentable over Qureshi<sup>2</sup> in view of Winkle<sup>3</sup> or Creps,<sup>4</sup> and further in view of Facer<sup>5</sup> and Kamimura.<sup>6</sup>

Claims 1-7, 10, 11, 15-17, 19, and 22 have also been rejected under 35 U.S.C. § 112, first and second paragraphs. Final Office Action dated June 5, 2007, at 2-3; Ans. 4, 13<sup>7</sup> (maintaining § 112 rejections on appeal). The Appellants do not contest the § 112 rejections on appeal. App. Br. 4.<sup>8</sup> Therefore, the rejection of claims 1-7, 10, 11, 15-17, 19, and 22 under 35 U.S.C. § 112, first and second paragraphs, is summarily affirmed.

## B. ISSUES

As to the rejection under § 103(a) on appeal, the Appellants argue:

*the art cited does not describe fluidized-bed coating basin comprising an induction coil incorporated in said fluidized-bed coating basin, an air flush system positioned above the pipe to eliminate powder accumulation and one or more metal flow-guide panels positioned below the pipe to eliminate powder deficit and resultant pores on the underside of the pipe.*

App. Br. 5 (emphasis in original).

Thus, the sole issue on appeal is: Would the step of coating the pipe in a fluidized-bed coating basin as recited in claim 1 have been obvious to one of ordinary skill in the art in view of the prior art of record?

We answer this question in the affirmative for essentially the reasons expressed in the Final Office Action dated June 5, 2007, and the

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<sup>2</sup> US 4,771,523 to Qureshi et al. issued September 20, 1988.

<sup>3</sup> US 5,176,755 to Winkle, Sr. et al. issued January 5, 1993.

<sup>4</sup> US 4,358,887 to Creps issued November 16, 1982.

<sup>5</sup> US 3,560,239 to Facer et al. issued February 2, 1971.

<sup>6</sup> US 3,616,983 to Kamimura et al. issued November 2, 1971.

<sup>7</sup> Supplemental Examiner's Answer dated February 23, 2009.

<sup>8</sup> Appeal Brief dated January 28, 2008.

Supplemental Examiner's Answer dated February 23, 2009. We add the following for emphasis.

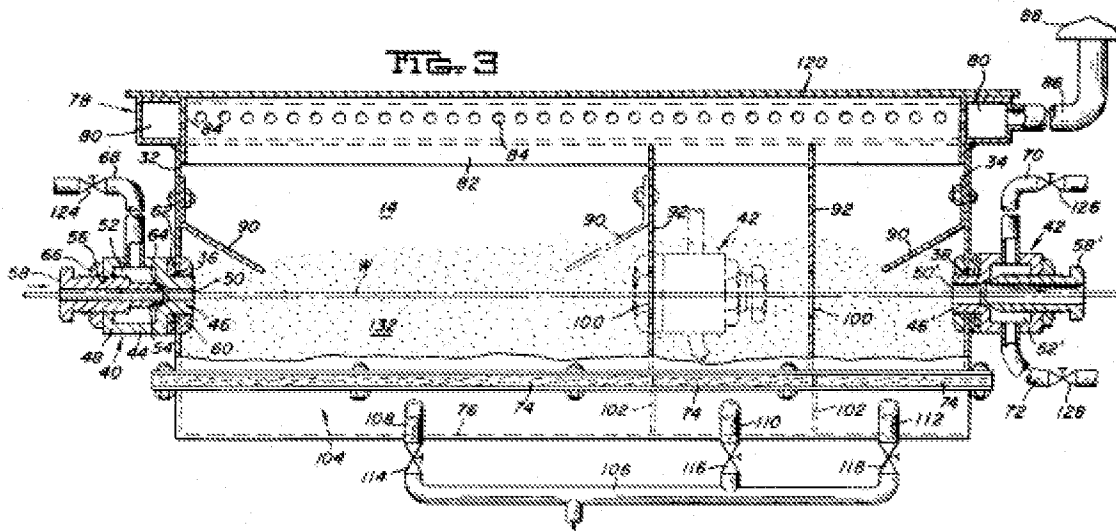
### C. FINDINGS OF FACT

Qureshi discloses a method for providing a nylon coating of uniform thickness on steel tubing. Qureshi 1:5-10.

Qureshi discloses that the powder coating may be applied in any manner suitable for treating a fast-moving article, for example, by an electrostatic-fluidized bed process. Qureshi discloses that a useful powder-coating process is shown in Kamimura (US 3,616,983). Qureshi 4:60-65.

Facer discloses a process for coating a wire with a resin, such as nylon. Facer 2:67-3:4.

Facer Figure 3, reproduced below, illustrates a coating unit used in the disclosed process. Facer 1:50-51.



Facer Figure 3 depicts a coating unit.

Facer describes the operation of the coating unit as follows:

As the wire W passes through the fluidized bed of powdered resin 132 it picks up a coating of the same. The bed is kept in a

fluidized state by means of the air passing through the diffusion board 74 and also by the air passing through the air seals [40, 42]. The deflectors 90 prevent this latter air from rising directly through the bed at each end. Air movement at the end seals prevents dead space in or around the seal so as to prevent agglomeration [sic, agglomeration] of the resin at the wire entrance and exit points. The air at the exit seal [42] blows excess powder from the wire and prevents escape of powder from the tank.

Facer 3:25-35.

Facer discloses that fumes and air passing through the openings 84 above the wire are drawn through conduit 86 by means of suction fan 88.

Facer 3:59-61.

#### D. PRINCIPLES OF LAW

The test for obviousness “is what the combined teachings of the references would have suggested to those of ordinary skill in the art.” The test is not that the claimed invention must be expressly suggested in any one or all of the references. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

During patent examination, the pending claims must be interpreted as broadly as their terms reasonably allow. *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989).

#### E. ANALYSIS

Claim 1 recites the step of coating the pipe with a coating material in a fluidized-bed coating basin wherein the fluidized-bed coating basin comprises an induction coil incorporated therein, an air flush system positioned above the pipe, and one or more metal flow-guide panels positioned below the pipe. App. Br., Claims Appendix.

The Examiner determined, and the Appellants do not dispute, that the combined teachings of Qureshi and Kamimura suggest “an induction coil

incorporated in said fluidized-bed coating basin” as recited in claim 1. Final 4-5; Ans. 5-6.

The Examiner found that Qureshi does not describe the claimed air flush system or one or more flow-guide panels as recited in claim 1. Final 6-7; Ans. 8. Nonetheless, the Examiner found that Facer discloses an air flush system positioned above the wire comprising “manifolds 78 having closely spaced holes that are connected via conduit 86 to suction fan 88.” Final 7; Ans. 8-9. The Examiner found that the air flush system also includes the air seals 40, 42 and guide panels 90 disclosed in Facer. In particular, the Examiner found that the air seals and guide panels are positioned above the wire and function “to ‘prevent agglomeration of the resin at the wire entrance and exit points’, which is equivalent to the claimed ‘eliminate powder accumulation’, as accumulation would be a form of agglomeration.” Final 7; Ans. 8.

As for guide panels positioned below the pipe, the Examiner found that the diffusion board 74 is a planar surface and may be considered a panel(s). Final 7; Ans. 9. The Examiner found that the diffusion board guides powder toward the underside of the substrate and thus, would be effective for eliminating any powder deficit which could result in pores on the underside of the substrate. Final 7, 8; Ans. 9, 10.

The Examiner concluded that it would have been obvious to one of ordinary skill in the art to include the air flush system and guide panels disclosed in Facer in the fluidized-bed coating basin of Qureshi. Final 7-8; Ans. 9.

On this record, the Appellants have failed to explain in any detail why the Examiner’s factual findings with respect to Facer are erroneous.

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Likewise, the Appellants have failed to explain in any detail why the Examiner's conclusions of obviousness with respect to the combined teachings of Qureshi and Facer are erroneous.

F. DECISION

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

Ssl

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